IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A method of generating a free-form surface model, comprising ~~the steps~~ of:

applying linear transformation to a lattice polygon model to generate vertices of a free-form surface model corresponding to respective vertices of the lattice polygon model; and

generating control points of cubic Bezier curves that connect the vertices of the free-form surface model, and that correspond to respective edges of the lattice polygon model.

Claim 2 (Currently Amended): The method as claimed in claim 1, further comprising ~~a step of~~:

interpolating Gregory patches into a mesh comprised of the cubic Bezier curves.

Claim 3 (Currently Amended): The method as claimed in claim 1, further comprising ~~a step of~~:

adding rounding information to the lattice polygon model, the rounding information controlling how round the free-form surface model is when the free-form surface model is generated from the lattice polygon model and the rounding information,

wherein said ~~step of~~ applying linear transformation includes ~~a step of~~ generating the vertices of the free-form surface model by utilizing the rounding information.

Claim 4 (Original): The method as claimed in claim 3, wherein said rounding information includes rounding information attached to the vertices and the edges of the lattice polygon model.

Claim 5 (Currently Amended): The method as claimed in claim 1, further comprising a step of:

reconstructing the lattice polygon model from the free-form surface model by utilizing an inverse transformation of the linear transformation.

Claim 6 (Currently Amended): A computer-readable memory medium having a program embodied therein for causing a computer to generate a free-form surface model, said program comprising program code units configured to perform the steps of:

applying linear transformation to a lattice polygon model to generate vertices of a free-form surface model corresponding to respective vertices of the lattice polygon model; and

generating control points of cubic Bezier curves that connect the vertices of the free-form surface model, and that correspond to respective edges of the lattice polygon model.

Claim 7 (Currently Amended): The computer-readable memory medium as claimed in claim 6, further comprising a step of:

interpolating Gregory patches into a mesh comprised of the cubic Bezier curves.

Claim 8 (Currently Amended): The computer-readable memory medium as claimed in claim 6, further comprising a step of:

adding rounding information to the lattice polygon model, the rounding information controlling how round the free-form surface model is when the free-form surface model is generated from the lattice polygon model and the rounding information,

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wherein said ~~step of~~ applying linear transformation includes ~~a step of~~ generating the

vertices of the free-form surface model by utilizing the rounding information.

Claim 9 (Original): The computer-readable memory medium as claimed in claim 8,

wherein said rounding information includes rounding information attached to the vertices and

the edges of the lattice polygon model.

Claim 10 (Currently Amended): The computer-readable memory medium as claimed

in claim 6, further comprising ~~a step of~~:

reconstructing the lattice polygon model from the free-form surface model by

utilizing an inverse transformation of the linear transformation.

Claim 11 (Currently Amended): A method of transmitting 3D data via a network,

comprising ~~the steps of~~:

adding rounding information to a lattice polygon model, the rounding information

controlling how round a free-form surface model is when the free-form surface model is

generated from the lattice polygon model and the rounding information by applying linear

transformation to the lattice polygon model to generate vertices of the free-form surface

model corresponding to respective vertices of the lattice polygon model, and generating

control points of cubic Bezier curves that connect the vertices of the free-form surface model,

and that correspond to respective edges of the lattice polygon model; and

transmitting the lattice polygon model and the rounding information over the network.

Claim 12 (Currently Amended): A method of generating a free-form surface model,

comprising ~~the steps of~~:

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receiving a lattice polygon model and rounding information via a network;

applying linear transformation to the lattice polygon model to generate vertices of a free-form surface model corresponding to respective vertices of the lattice polygon model; and

generating control points of cubic Bezier curves that serve as edges to connect the vertices of the free-form surface model, and that correspond to respective edges of the lattice polygon model, wherein the rounding information controls how close the vertices and edges of the free-form surface model are to the respective vertices and edges of the lattice polygon model.

Claim 13 (Original): A server device for transmitting 3D data via a network, configured

to add rounding information to a lattice polygon model, the rounding information controlling how round a free-form surface model is when the free-form surface model is generated from the lattice polygon model and the rounding information by applying linear transformation to the lattice polygon model to generate vertices of the free-form surface model corresponding to respective vertices of the lattice polygon model, and generating control points of cubic Bezier curves that connect the vertices of the free-form surface model, and that correspond to respective edges of the lattice polygon model; and

to transmit the lattice polygon model and the rounding information over the network.

Claim 14 (Original): A client device connected to a network, configured

to receive a lattice polygon model and rounding information via the network; to apply linear transformation to the lattice polygon model to generate vertices of a free-form surface model corresponding to respective vertices of the lattice polygon model; and

to generate control points of cubic Bezier curves that serve as edges to connect the

vertices of the free-form surface model, and that correspond to respective edges of the lattice

polygon model,

wherein the rounding information controls how close the vertices and edges of the

free-form surface model are to the respective vertices and edges of the lattice polygon model.